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EDITORIAL

COVID-19 Epidemic Editorial

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COVID-19 is a novel form of coronavirus which has spread from its initial identification in Wuhan, China, and has been declared a pandemic by the World Health ~~Emergency~~ (WHO) [1]. Coronaviruses are a large family of viruses that cause illnesses ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). Coronaviruses are zoonotic, meaning they are transmitted between animals and people. Several known coronaviruses are circulating in animals that have not yet infected humans [2] but it appears that COVID-19 has crossed species from bats to snakes [3], and pangolins then to humans, initially via the live animal 'wet markets' of Wuhan [4].

As the epidemic is so recent, little systematic research is available but what exists indicates that COVID-19, whilst detectable in blood tests and infected secretions from those with a clinical history, presents difficulties for medical imagery; chest X-ray (CXR) lacks sensitivity and computed tomography (CT) scanning is required, but even that may not be completely helpful [5]. One Chinese study argues that the distinctive feature of COVID-19 is tachypnea, and so this might be useful ~~as a~~ diagnostic to[illegible] public places [6]. Chinese scholars have been instrumental in developing forecasting models for the spread of COVID-19, indicating that the epidemic might be over in China by April 2020 [7, 8], because the measures taken in China are so effective [9]. Currently, there are no pharmacological treatments available, but there are reports that a medicine has been found to be effective in previous coronaviruses (Remdesivir, an anti-viral developed by Gilhead Sciences) is beginning trials, and that a US company (Moderna) has developed a vaccine using a novel genetic technique [10].

As of March 2020, COVID-19 has spread worldwide, to many Asian and Middle Eastern countries, including Japan, South Korea, Iran, Singapore, the United States and European countries including Italy, Spain and the United Kingdom. As of March 2020, the Italian government has placed the whole country in lock down to prevent the spread of infection, with citizens told to stay at home for all but the most urgent reasons. The USA has instigated a travel ban on flights f[illegible]mainland Europe. Arguably, countries not showing cases of COVID-19 are either not capable or not willing to attempt accurate diagnosis for their population, and may worsen their death toll as a result. Attention has been focused on containing the spread of the virus, by quarantining those shown to be infected and asking those potentially infected to self-quarantine. However, some commentators believe that the window of opportunity for containment has passed and instead mitigation will need to take place, even in areas that currently have relatively few confirmed cases such as the UK by closing down communal activities such as school attendance, sports events and festivals, to create 'social distance' [11]. The UK government has stopped short of those measures as of 12/3/2020 but does not rule them out in future.

Although COVID-19 appears to spread more virulently than other coronaviruses such as SARS, the mortality rate seems to be less, with 2.8% of people dying from COVID-19 compared to 9.6% from SARs [3]. The elderly and those with pre-existing conditions are more susceptible. Flu-like symptoms including a fever, a cough, or difficulty breathing are evident, although most people will not have severe symptoms. Basic personal hygiene including the use of disposable tissues and hand hygiene is recommended to limit virus spread, with full personal protective equipment necessary (where available) for healthcare staff. Masks are effective but problematic if they are not used correctly when they will become reservoirs of infection. Although speculative, some sources are hopeful that COVID-19 will not survive summer conditions, however, the virus may continue to thrive in countries' colder seasons and then return [12]. It is impossible to say if or when treatments or vaccines may be available, or what the impact on countries' health systems might be, or indeed what might happen to the global economy if trading ceases as an aspect of 'social distance' strategies.

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Stock markets have suffered, and the UK government has reduced interest rates to try to help, but no government can compensate all people affected by a down turn.

This pandemic is evolving daily and people should check their own country's public health advice and use reputable sources such as BMJ and Lancet, both of which journals have free on-line resources.

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